

resin to dry by evaporation without a chemical reaction. Lacquers are resolvable in their original solvent.

Metalized epoxy coating—A coating that contains relatively large quantities of metallic pigmentation for appearance and/or added protection.

Mold release—A coating applied to a mold surface to prevent the molded piece from sticking to the mold as it is removed.

Nonstructural adhesive—An adhesive that bonds nonload bearing aerospace components in noncritical applications and is not covered in any other specialty adhesive categories.

Optical anti-reflection coating—A coating with a low reflectance in the infrared and visible wavelength ranges, which is used for anti-reflection on or near optical and laser hardware.

Part marking coating—Coatings or inks used to make identifying markings on materials, components, and/or assemblies. These markings may be either permanent or temporary.

Pretreatment coating—An organic coating that contains at least 0.5 percent acids by weight and is applied directly to metal or composite surfaces to provide surface etching, corrosion resistance, adhesion, and ease of stripping.

Rain erosion-resistant coating—A coating or coating system used to protect the leading edges of parts such as flaps, stabilizers, radomes, engine inlet nacelles, etc. against erosion caused by rain impact during flight.

Rocket motor bonding adhesive—An adhesive used in rocket motor bonding applications.

Rocket motor nozzle coating—A catalyzed epoxy coating system used in elevated temperature applications on rocket motor nozzles.

Rubber-based adhesive—Quick setting contact cements that provide a strong, yet flexible, bond between two mating surfaces that may be of dissimilar materials.

Scale inhibitor—A coating that is applied to the surface of a part prior to thermal processing to inhibit the formation of scale.

Screen print ink—Inks used in screen printing processes during fabrication of decorative laminates and decals.

Seal coat maskant—An overcoat applied over a maskant to improve abrasion and chemical resistance during production operations.

Sealant—A material used to prevent the intrusion of water, fuel, air, or other liquids or solids from certain areas of aerospace vehicles or components. There are two categories of sealants: extrudable/rollable/brushable sealants and sprayable sealants.

Silicone insulation material—Insulating material applied to exterior metal surfaces for protection from high temperatures caused by atmospheric friction or engine exhaust. These materials differ from ablative coatings in that they are not "sacrificial."

Solid film lubricant—A very thin coating consisting of a binder system containing as its chief pigment material one or more of the following: molybdenum, graphite, polytetrafluoroethylene (PTFE), or other solids that act as a dry lubricant between faying surfaces.

Specialized function coatings—Coatings that fulfill extremely specific engineering requirements that are limited in application and are characterized by low volume usage. This category excludes coatings covered in other Specialty Coating categories.

Structural autoclavable adhesive—An adhesive used to bond load-carrying aerospace components that is cured by heat and pressure in an autoclave.

Structural nonautoclavable adhesive—An adhesive cured under ambient conditions that is used to bond load-carrying aerospace components or for other critical functions, such as nonstructural bonding in the proximity of engines.

Temporary protective coating—A coating applied to provide scratch or corrosion protection during manufacturing, storage, or transportation. Two types include peelable protective coatings and alkaline removable coatings. These materials are not intended to protect against strong acid or alkaline solutions. Coatings that provide this type of protection from chemical processing are not included in this category.

Thermal control coating—Coatings formulated with specific thermal conductive or radiative properties to permit temperature control of the substrate.

Touch-up and Repair Coating—A coating used to cover minor coating imperfections appearing after the main coating operation.

Wet fastener installation coating—A primer or sealant applied by dipping, brushing, or daubing to fasteners that are installed before the coating is cured.

Wing coating—A corrosion-resistant topcoat that is resilient enough to withstand the flexing of the wings.

[63 FR 15026, Mar. 27, 1998]

Subpart HH [Reserved]

Subpart II—National Emission Standards for Shipbuilding and Ship Repair (Surface Coating)

SOURCE: 60 FR 64336, Dec. 15, 1995, unless otherwise noted.

§ 63.780 Relationship of subpart II to subpart A of this part.

Table 1 of this subpart specifies the provisions of subpart A of this part

that apply to owners and operators of sources subject to the provisions of this subpart.

§ 63.781 Applicability.

(a) The provisions of this subpart apply to shipbuilding and ship repair operations at any facility that is a major source.

(b) The provisions of this subpart do not apply to coatings used in volumes of less than 200 liters (52.8 gallons) per year, provided the total volume of coating exempt under this paragraph does not exceed 1,000 liters per year (264 gallons per year) at any facility. Coatings exempt under this paragraph shall be clearly labeled as “low-usage exempt,” and the volume of each such coating applied shall be maintained in the facility’s records.

(c) The provisions of this subpart do not apply to coatings applied with hand-held, nonrefillable, aerosol containers or to unsaturated polyester resin (i.e., fiberglass lay-up) coatings. Coatings applied to suitably prepared fiberglass surfaces for protective or decorative purposes are subject to this subpart.

(d) The provisions in subpart A of this part pertaining to startups, shutdowns, and malfunctions and continuous monitoring do not apply to this source category unless an add-on control system is used to comply with this subpart in accordance with § 63.783(c).

§ 63.782 Definitions.

Terms used in this subpart are defined in the Clean Air Act (CAA), in subpart A of part 63, or in this section as follows:

Add-on control system means an air pollution control device such as a carbon absorber or incinerator that reduces pollution in an air stream by destruction or removal prior to discharge to the atmosphere.

Affected source means any shipbuilding or ship repair facility having surface coating operations with a minimum 1,000 liters (L) (264 gallons [gal]) annual marine coating usage that is subject to this subpart.

Air flask specialty coating means any special composition coating applied to interior surfaces of high pressure breathing air flasks to provide corro-

sion resistance and that is certified safe for use with breathing air supplies.

Antenna specialty coating means any coating applied to equipment through which electromagnetic signals must pass for reception or transmission.

Antifoulant specialty coating means any coating that is applied to the underwater portion of a vessel to prevent or reduce the attachment of biological organisms and that is registered with the EPA as a pesticide under the Federal Insecticide, Fungicide, and Rodenticide Act.

As applied means the condition of a coating at the time of application to the substrate, including any thinning solvent.

As supplied means the condition of a coating before any thinning, as sold and delivered by the coating manufacturer to the user.

Batch means the product of an individual production run of a coating manufacturer’s process. A batch may vary in composition from other batches of the same product.

Bitumens mean black or brown materials that are soluble in carbon disulfide and consist mainly of hydrocarbons.

Bituminous resin coating means any coating that incorporates bitumens as a principal component and is formulated primarily to be applied to a substrate or surface to resist ultraviolet radiation and/or water.

Certify means, in reference to the volatile organic compounds (VOC) content or volatile organic hazardous air pollutants (VOHAP) content of a coating, to attest to the VOC content as determined through analysis by Method 24 of appendix A to 40 CFR part 60 or through use of forms and procedures outlined in appendix A of this subpart, or to attest to the VOHAP content as determined through an Administrator-approved test method. In the case of conflicting results, Method 24 of Appendix A to 40 CFR part 60 shall take precedence over the forms and procedures outlined in appendix A to this subpart for the options in which VOC is used as a surrogate for VOHAP.

Coating means any material that can be applied as a thin layer to a substrate and which cures to form a continuous solid film.

Cold-weather time period means any time during which the ambient temperature is below 4.5°C (40°F) and coating is to be applied.

Container of coating means the container from which the coating is applied, including but not limited to a bucket or pot.

Cure volatiles means reaction products which are emitted during the chemical reaction which takes place in some coating films at the cure temperature. These emissions are other than those from the solvents in the coating and may, in some cases, comprise a significant portion of total VOC and/or VOHAP emissions.

Epoxy means any thermoset coating formed by reaction of an epoxy resin (i.e., a resin containing a reactive epoxide with a curing agent).

Exempt compounds means specified organic compounds that are not considered VOC due to negligible photochemical reactivity. Exempt compounds are specified in 40 CFR 51.100(s).

Facility means all contiguous or adjoining property that is under common ownership or control, including properties that are separated only by a road or other public right-of-way.

General use coating means any coating that is not a specialty coating.

Hazardous air pollutants (HAP) means any air pollutant listed in or pursuant to section 112(b) of the CAA.

Heat resistant specialty coating means any coating that during normal use must withstand a temperature of at least 204°C (400°F).

High-gloss specialty coating means any coating that achieves at least 85 percent reflectance on a 60 degree meter when tested by ASTM Method D523 (incorporation by reference—see § 63.14).

High-temperature specialty coating means any coating that during normal use must withstand a temperature of at least 426°C (800°F).

Inorganic zinc (high-build) specialty coating means a coating that contains 960 grams per liter (8 pounds per gallon) or more elemental zinc incorporated into an inorganic silicate binder that is applied to steel to provide galvanic corrosion resistance. (These coatings are typically applied at more than 2 mil dry film thickness.)

Major source means any source that emits or has the potential to emit, in the aggregate, 9.1 megagrams per year (10 tons per year) or more of any HAP or 22.7 megagrams per year (25 tons per year) or more of any combination of HAP.

Maximum allowable thinning ratio means the maximum volume of thinner that can be added per volume of coating without violating the standards of § 63.783(a), as determined using Equation 1 of this subpart.

Military exterior specialty coating or Chemical Agent Resistant Coatings ("CARC") means any exterior topcoat applied to military or U.S. Coast Guard vessels that are subject to specific chemical, biological, and radiological washdown requirements.

Mist specialty coating means any low viscosity, thin film, epoxy coating applied to an inorganic zinc primer that penetrates the porous zinc primer and allows the occluded air to escape through the paint film prior to curing.

Navigational aids specialty coating means any coating applied to Coast Guard buoys or other Coast Guard waterway markers when they are recoated aboard ship at their usage site and immediately returned to the water.

Nonskid specialty coating means any coating applied to the horizontal surfaces of a marine vessel for the specific purpose of providing slip resistance for personnel, vehicles, or aircraft.

Nonvolatiles (or volume solids) means substances that do not evaporate readily. This term refers to the film-forming material of a coating.

Normally closed means a container or piping system is closed unless an operator is actively engaged in adding or removing material.

Nuclear specialty coating means any protective coating used to seal porous surfaces such as steel (or concrete) that otherwise would be subject to intrusion by radioactive materials. These coatings must be resistant to long-term (service life) cumulative radiation exposure (ASTM D4082-89 [incorporation by reference—see § 63.14]), relatively easy to decontaminate (ASTM D4256-89 [reapproved 1994] [incorporation by reference—see § 63.14]), and resistant to various chemicals to which

the coatings are likely to be exposed (ASTM D3912–80 [incorporation by reference—see § 63.14]). [For nuclear coatings, see the general protective requirements outlined by the U.S. Nuclear Regulatory Commission in a report entitled “U.S. Atomic Energy Commission Regulatory Guide 1.54” dated June 1973, available through the Government Printing Office at (202) 512–2249 as document number A74062–00001.]

Operating parameter value means a minimum or maximum value established for a control device or process parameter that, if achieved by itself or in combination with one or more other operating parameter values, determines that an owner or operator has complied with an applicable emission limitation or standard.

Organic zinc specialty coating means any coating derived from zinc dust incorporated into an organic binder that contains more than 960 grams of elemental zinc per liter (8 pounds per gallon) of coating, as applied, and that is used for the expressed purpose of corrosion protection.

Pleasure craft means any marine or fresh-water vessel used by individuals for noncommercial, nonmilitary, and recreational purposes that is less than 20 meters in length. A vessel rented exclusively to or chartered by individuals for such purposes shall be considered a pleasure craft.

Pretreatment wash primer specialty coating means any coating that contains a minimum of 0.5 percent acid, by mass, and is applied only to bare metal to etch the surface and enhance adhesion of subsequent coatings.

Repair and maintenance of thermoplastic coating of commercial vessels (specialty coating) means any vinyl, chlorinated rubber, or bituminous resin coating that is applied over the same type of existing coating to perform the partial recoating of any in-use commercial vessel. (This definition does not include coal tar epoxy coatings, which are considered “general use” coatings.)

Rubber camouflage specialty coating means any specially formulated epoxy coating used as a camouflage topcoat for exterior submarine hulls and sonar domes.

Sealant for thermal spray aluminum means any epoxy coating applied to thermal spray aluminum surfaces at a maximum thickness of 1 dry mil.

Ship means any marine or fresh-water vessel used for military or commercial operations, including self-propelled vessels, those propelled by other craft (barges), and navigational aids (buoys). This definition includes, but is not limited to, all military and Coast Guard vessels, commercial cargo and passenger (cruise) ships, ferries, barges, tankers, container ships, patrol and pilot boats, and dredges. For purposes of this subpart, pleasure crafts and offshore oil and gas drilling platforms are not considered ships.

Shipbuilding and ship repair operations means any building, repair, repainting, converting, or alteration of ships.

Special marking specialty coating means any coating that is used for safety or identification applications, such as markings on flight decks and ships’ numbers.

Specialty coating means any coating that is manufactured and used for one of the specialized applications described within this list of definitions.

Specialty interior coating means any coating used on interior surfaces aboard U.S. military vessels pursuant to a coating specification that requires the coating to meet specified fire retardant and low toxicity requirements, in addition to the other applicable military physical and performance requirements.

Tack specialty coating means any thin film epoxy coating applied at a maximum thickness of 2 dry mils to prepare an epoxy coating that has dried beyond the time limit specified by the manufacturer for the application of the next coat.

Thinner means a liquid that is used to reduce the viscosity of a coating and that evaporates before or during the cure of a film.

Thinning ratio means the volumetric ratio of thinner to coating, as supplied.

Thinning solvent: see Thinner.

Undersea weapons systems specialty coating means any coating applied to any component of a weapons system intended to be launched or fired from under the sea.

Volatile organic compounds (VOC) is as defined in § 51.100(s) of this chapter.

Volatile organic hazardous air pollutants (VOHAP) means any compound listed in or pursuant to section 112(b) of the CAA that contains carbon, excluding metallic carbides and carbonates. This definition includes VOC listed as HAP and exempt compounds listed as HAP.

Weld-through preconstruction primer (specialty coating) means a coating that provides corrosion protection for steel during inventory, is typically applied at less than 1 mil dry film thickness, does not require removal prior to welding, is temperature resistant (burn back from a weld is less than 1.25 centimeters [0.5 inch]), and does not normally require removal before applying film-building coatings, including inorganic zinc high-build coatings. When constructing new vessels, there may be a need to remove areas of weld-through preconstruction primer due to surface damage or contamination prior to application of film-building coatings.

§ 63.783 Standards.

(a) No owner or operator of any existing or new affected source shall cause or allow the application of any coating to a ship with an as-applied VOHAP content exceeding the applicable limit given in Table 2 of this subpart, as determined by the procedures described in § 63.785 (c)(1) through (c)(4). For the compliance procedures described in § 63.785 (c)(1) through (c)(3), VOC shall be used as a surrogate for VOHAP, and Method 24 of Appendix A to 40 CFR part 60 shall be used as the definitive measure for determining compliance. For the compliance procedure described in § 63.785(c)(4), an alternative test method capable of measuring independent VOHAP shall be used to determine compliance. The method must be submitted to and approved by the Administrator.

(b) Each owner or operator of a new or existing affected source shall ensure that:

(1) All handling and transfer of VOHAP-containing materials to and from containers, tanks, vats, drums, and piping systems is conducted in a manner that minimizes spills.

(2) All containers, tanks, vats, drums, and piping systems are free of cracks, holes, and other defects and remain closed unless materials are being added to or removed from them.

(c) *Approval of alternative means of limiting emissions.* (1) The owner or operator of an affected source may apply to the Administrator for permission to use an alternative means (such as an add-on control system) of limiting emissions from coating operations. The application must include:

(i) An engineering material balance evaluation that provides a comparison of the emissions that would be achieved using the alternative means to those that would result from using coatings that comply with the limits in Table 2 of this subpart, or the results from an emission test that accurately measures the capture efficiency and control device efficiency achieved by the control system and the composition of the associated coatings so that the emissions comparison can be made;

(ii) A proposed monitoring protocol that includes operating parameter values to be monitored for compliance and an explanation of how the operating parameter values will be established through a performance test; and

(iii) Details of appropriate record-keeping and reporting procedures.

(2) The Administrator shall approve the alternative means of limiting emissions if, in the Administrator's judgment, postcontrol emissions of VOHAP per volume applied solids will be no greater than those from the use of coatings that comply with the limits in Table 2 of this subpart.

(3) The Administrator may condition approval on operation, maintenance, and monitoring requirements to ensure that emissions from the source are no greater than those that would otherwise result from this subpart.

§ 63.784 Compliance dates.

(a) Each owner or operator of an existing affected source shall comply within two years after the effective date of this subpart.

(b) Each owner or operator of an existing unaffected area source that increases its emissions of (or its potential to emit) HAP such that the source becomes a major source that is subject

to this subpart shall comply within 1 year after the date of becoming a major source.

(c) Each owner or operator of a new or reconstructed source shall comply with this subpart according to the schedule in § 63.6(b).

[60 FR 64336, Dec. 15, 1995, as amended at 61 FR 30816, June 18, 1996]

§ 63.785 Compliance procedures.

(a) For each batch of coating that is received by an affected source, the owner or operator shall (see Figure 1 of this section for a flow diagram of the compliance procedures):

(1) Determine the coating category and the applicable VOHAP limit as specified in § 63.783(a).

(2) Certify the as-supplied VOC content of the batch of coating. The owner or operator may use a certification supplied by the manufacturer for the batch, although the owner or operator retains liability should subsequent testing reveal a violation. If the owner or operator performs the certification testing, only one of the containers in which the batch of coating was received is required to be tested.

(b)(1) In lieu of testing each batch of coating, as applied, the owner or operator may determine compliance with the VOHAP limits using any combination of the procedures described in paragraphs (c)(1), (c)(2), (c)(3), and (c)(4) of this section. The procedure used for each coating shall be determined and documented prior to application.

(2) The results of any compliance demonstration conducted by the affected source or any regulatory agency using Method 24 shall take precedence over the results using the procedures in paragraphs (c)(1), (c)(2), or (c)(3) of this section.

(3) The results of any compliance demonstration conducted by the affected source or any regulatory agency using an approved test method to determine VOHAP content shall take precedence over the results using the procedures in paragraph (c)(4) of this section.

(c)(1) *Coatings to which thinning solvent will not be added.* For coatings to which thinning solvent (or any other material) will not be added under any circumstance or to which only water is

added, the owner or operator of an affected source shall comply as follows:

(i) Certify the as-applied VOC content of each batch of coating.

(ii) Notify the persons responsible for applying the coating that no thinning solvent may be added to the coating by affixing a label to each container of coating in the batch or through another means described in the implementation plan required in § 63.787(b).

(iii) If the certified as-applied VOC content of each batch of coating used during a calendar month is less than or equal to the applicable VOHAP limit in § 63.783(a) (either in terms of g/L of coating or g/L of solids), then compliance is demonstrated for that calendar month, unless a violation is revealed using Method 24 of Appendix A to 40 CFR part 60.

(2) *Coatings to which thinning solvent will be added—coating-by-coating compliance.* For a coating to which thinning solvent is routinely or sometimes added, the owner or operator shall comply as follows:

(i) Prior to the first application of each batch, designate a single thinner for the coating and calculate the maximum allowable thinning ratio (or ratios, if the affected source complies with the cold-weather limits in addition to the other limits specified in Table 2 of this subpart) for each batch as follows:

$$R = \frac{(V_s)(\text{VOHAP limit}) - m_{\text{VOC}}}{D_{\text{th}}} \quad \text{Eqn. 1}$$

where:

R=Maximum allowable thinning ratio for a given batch (L thinner/L coating as supplied);

V_s =Volume fraction of solids in the batch as supplied (L solids/L coating as supplied);

VOHAP limit=Maximum allowable as-applied VOHAP content of the coating (g VOHAP/L solids);

m_{VOC} =VOC content of the batch as supplied [g VOC (including cure volatiles and exempt compounds on the HAP list)/L coating (including water and exempt compounds) as supplied];

D_{th} =Density of the thinner (g/L).

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If V_s is not supplied directly by the coating manufacturer, the owner or operator shall determine V_s as follows:

$$V_s = 1 - \frac{m_{\text{volatiles}}}{D_{\text{avg}}} \quad \text{Eqn. 2}$$

where:

$m_{\text{volatiles}}$ =Total volatiles in the batch, including VOC, water, and exempt compounds (g/L coating); and

D_{avg} =Average density of volatiles in the batch (g/L).

The procedures specified in § 63.786(d) may be used to determine the values of variables defined in this paragraph. In addition, the owner or operator may choose to construct nomographs, based on Equation 1 of this subpart, similar or identical to the one provided in ap-

pendix B of this subpart as a means of easily estimating the maximum allowable thinning ratio.

(ii) Prior to the first application of each batch, notify painters and other persons, as necessary, of the designated thinner and maximum allowable thinning ratio(s) for each batch of the coating by affixing a label to each container of coating or through another means described in the implementation plan required in § 63.787(b).

(iii) By the 15th day of each calendar month, determine the volume of each batch of the coating used, as supplied, during the previous month.

(iv) By the 15th day of each calendar month, determine the total allowable volume of thinner for the coating used during the previous month as follows:

$$V_{\text{th}} = \sum_{i=1}^n (R \times V_b)_i + \sum_{i=1}^n (R_{\text{cold}} \times V_{b-\text{cold}})_i \quad \text{Eqn. 3}$$

where:

V_{th} =Total allowable volume of thinner for the previous month (L thinner);

V_b =Volume of each batch, as supplied and before being thinned, used during non-cold-weather days of the previous month (L coating as supplied);

R_{cold} =Maximum allowable thinning ratio for each batch used during cold-weather days (L thinner/L coating as supplied);

$V_{b-\text{cold}}$ =Volume of each batch, as supplied and before being thinned, used during cold-weather days of the previous month (L coating as supplied);

i =Each batch of coating; and

n =Total number of batches of the coating.

(v) By the 15th day of each calendar month, determine the volume of thinner actually used with the coating during the previous month.

(vi) If the volume of thinner actually used with the coating [paragraph (c)(3)(v) of this section] is less than or equal to the total allowable volume of thinner for the coating [paragraph (c)(3)(iv) of this section], then compli-

ance is demonstrated for the coating for the previous month, unless a violation is revealed using Method 24 of Appendix A to 40 CFR part 60.

(3) *Coatings to which the same thinning solvent will be added—group compliance.* For coatings to which the same thinning solvent (or other material) is routinely or sometimes added, the owner or operator shall comply as follows:

(i) Designate a single thinner to be added to each coating during the month and “group” coatings according to their designated thinner.

(ii) Prior to the first application of each batch, calculate the maximum allowable thinning ratio (or ratios, if the affected source complies with the cold-weather limits in addition to the other limits specified in Table 2 of this subpart) for each batch of coating in the group using the equations in paragraph (c)(2) of this section.

(iii) Prior to the first application of each “batch,” notify painters and other persons, as necessary, of the designated thinner and maximum allowable thinning ratio(s) for each batch in the group by affixing a label to each

container of coating or through another means described in the implementation plan required in § 63.787(b).

(iv) By the 15th day of each calendar month, determine the volume of each batch of the group used, as supplied, during the previous month.

(v) By the 15th day of each calendar month, determine the total allowable volume of thinner for the group for the previous month using Equation 3 of this subpart.

(vi) By the 15th day of each calendar month, determine the volume of thinner actually used with the group during the previous month.

(vii) If the volume of thinner actually used with the group [paragraph (c)(3)(vi) of this section] is less than or equal to the total allowable volume of thinner for the group [paragraph (c)(3)(v) of this section], then compliance is demonstrated for the group for the previous month, unless a violation is revealed using Method 24 of Appendix A to 40 CFR part 60.

(4) *Demonstration of compliance through an alternative (i.e., other than Method 24 of Appendix A to 40 CFR part 60) test method.* The owner or operator shall comply as follows:

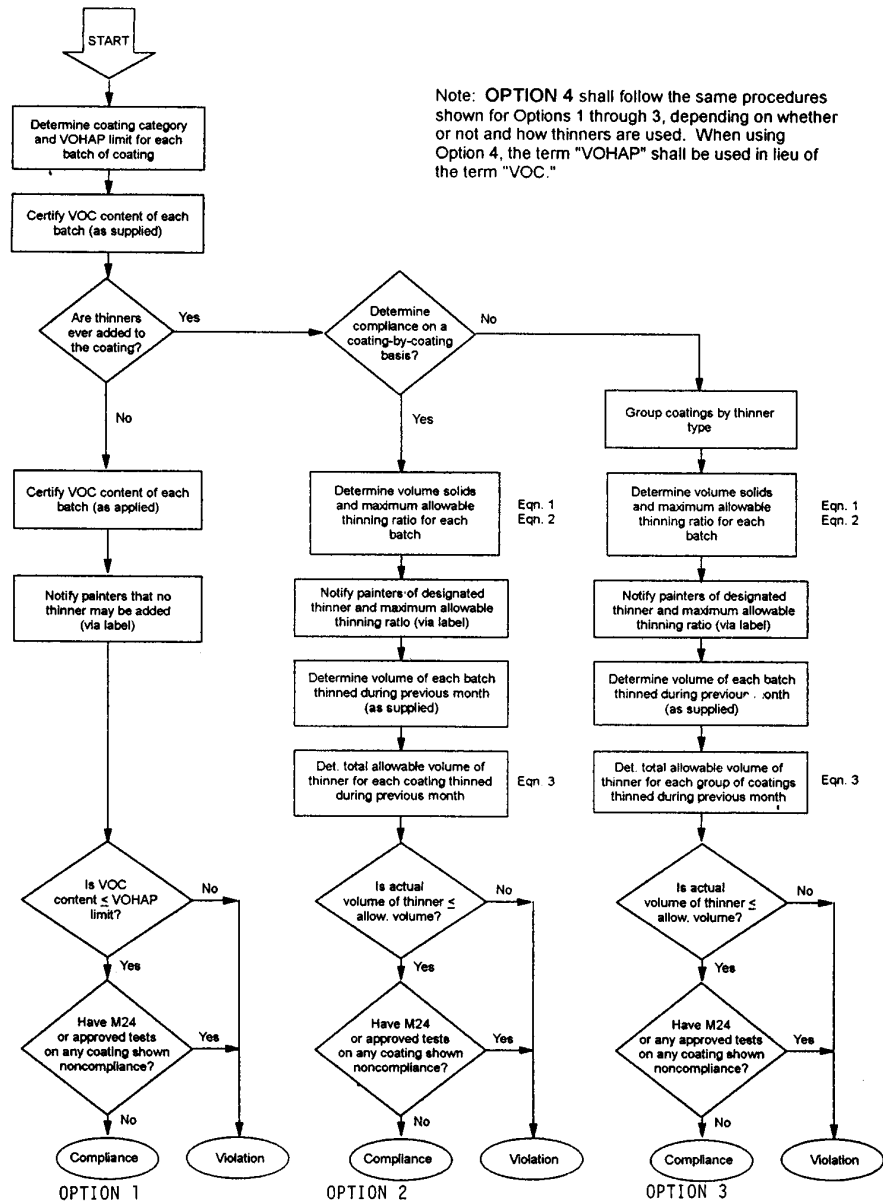
(i) Certify the as-supplied VOHAP content (g VOHAP/L solids) of each batch of coating.

(ii) If no thinning solvent will be added to the coating, the owner or operator of an affected source shall follow the procedure described in § 63.785(c)(1), except that VOHAP content shall be used in lieu of VOC content.

(iii) If thinning solvent will be added to the coating, the owner or operator of an affected source shall follow the procedure described in § 63.785(c)(2) or (3), except that in Equation 1 of this subpart: the term " m_{VOC} " shall be replaced by the term " m_{VOHAP} ," defined as the VOHAP content of the coating as supplied (g VOHAP/L coating) and the term " D_{th} " shall be replaced by the term " $D_{th(VOHAP)}$ " defined as the average density of the VOHAP thinner(s) (g/L).

(d) A violation revealed through any approved test method shall result in a 1-day violation for enforcement purposes. A violation revealed through the recordkeeping procedures described in paragraphs (c)(1) through (c)(4) of this section shall result in a 30-day violation for enforcement purposes, unless the owner or operator provides sufficient data to demonstrate the specific days during which noncompliant coatings were applied.

Figure 1 to §63.785 Flow diagram of compliance procedures

**§ 63.786 Test methods and procedures.**

(a) For the compliance procedures described in § 63.785(c) (1) through (c)(3),

Method 24 of 40 CFR part 60, appendix A, is the definitive method for determining the VOC content of coatings, as supplied or as applied. When a coating

or thinner contains exempt compounds that are volatile HAP or VOHAP, the owner or operator shall ensure, when determining the VOC content of a coating, that the mass of these exempt compounds is included.

(b) For the compliance procedure described in § 63.785(c)(4), the Administrator must approve the test method for determining the VOHAP content of coatings and thinners. As part of the approval, the test method must meet the specified accuracy limits indicated below for sensitivity, duplicates, repeatability, and reproducibility coefficient of variation each determined at the 95 percent confidence limit. Each percentage value below is the corresponding coefficient of variation multiplied by 2.8 as in the ASTM Method E180–93: Standard Practice for Determining the Precision of ASTM Methods for Analysis and Testing of Industrial Chemicals (incorporation by reference—see § 63.14).

(1) *Sensitivity.* The overall sensitivity must be sufficient to identify and calculate at least one mass percent of the compounds of interest based on the original sample. The sensitivity is defined as ten times the noise level as specified in ASTM Method D3257–93: Standard Test Methods for Aromatics in Mineral Spirits by Gas Chromatography (incorporation by reference—see § 63.14). In determining the sensitivity, the level of sample dilution must be factored in.

(2) *Repeatability.* First, at the 0.1–5 percent analyte range the results would be suspect if duplicates vary by more than 6 percent relative and/or day to day variation of mean duplicates by the same analyst exceeds 10 percent relative. Second, at greater than 5 percent analyte range the results would be suspect if duplicates vary by more than 5 percent relative and/or day to day variation of duplicates by the same analyst exceeds 5 percent relative.

(3) *Reproducibility.* First, at the 0.1–5 percent analyte range the results would be suspect if lab to lab variation exceeds 60 percent relative. Second, at greater than 5 percent range the results would be suspect if lab to lab variation exceeds 20 percent relative.

(4) Any test method should include information on the apparatus, reagents

and materials, analytical procedure, procedure for identification and confirmation of the volatile species in the mixture being analyzed, precision and bias, and other details to be reported. The reporting should also include information on quality assurance (QA) auditing.

(5) Multiple and different analytical techniques must be used for positive identification if the components in a mixture under analysis are not known. In such cases a single column gas chromatograph (GC) may not be adequate. A combination of equipment may be needed such as a GC/mass spectrometer or GC/infrared system. (If a GC method is used, the operator must use practices in ASTM Method E260–91: Standard Practice for Gas Chromatography [incorporation by reference—see § 63.14].)

(c) A coating manufacturer or the owner or operator of an affected source may use batch formulation data as a test method in lieu of Method 24 of Appendix A to 40 CFR part 60 to certify the as-supplied VOC content of a coating if the manufacturer or the owner or operator has determined that batch formulation data have a consistent and quantitatively known relationship to Method 24 results. This determination shall consider the role of cure volatiles, which may cause emissions to exceed an amount based solely upon coating formulation data. Notwithstanding such determination, in the event of conflicting results, Method 24 of appendix A of 40 CFR part 60 shall take precedence.

(d) Each owner or operator of an affected source shall use or ensure that the manufacturer uses the form and procedures mentioned in appendix A of this subpart to determine values for the thinner and coating parameters used in Equations 1 and 2 of this subpart. The owner or operator shall ensure that the coating/thinner manufacturer (or supplier) provides information on the VOC and VOHAP contents of the coatings/thinners and the procedure(s) used to determine these values.

§ 63.787 Notification requirements.

(a) Each owner or operator of an affected source shall comply with all applicable notification requirements in

§ 63.9(a) through (d) and (i) through (j), with the exception that the deadline specified in § 63.9(b) (2) and (3) shall be extended from 120 days to 180 days. Any owner or operator that receives approval pursuant to § 63.783(c) to use an add-on control system to control coating emissions shall comply with the applicable requirements of § 63.9(e) through (h).

(b) *Implementation plan.* The provisions of § 63.9(a) apply to the requirements of this paragraph.

(1) Each owner or operator of an affected source shall:

(i) Prepare a written implementation plan that addresses each of the subject areas specified in paragraph (b)(3) of this section; and

(ii) Not later than one year after the effective date of this subpart, submit the implementation plan to the Administrator along with the notification required by § 63.9(b)(2) or (b)(5) of subpart A, as applicable.

(2) [Reserved]

(3) *Implementation plan contents.* Each implementation plan shall address the following subject areas:

(i) *Coating compliance procedures.* The implementation plan shall include the compliance procedure(s) under § 63.785(c) that the source intends to use.

(ii) *Recordkeeping procedures.* The implementation plan shall include the procedures for maintaining the records required under § 63.788, including the procedures for gathering the necessary data and making the necessary calculations.

(iii) *Transfer, handling, and storage procedures.* The implementation plan shall include the procedures for ensuring compliance with § 63.783(b).

(4) *Major sources that intend to become area sources by the compliance date.* Existing major sources that intend to become area sources by the December 16, 1997 compliance date may choose to submit, in lieu of the implementation plan required under paragraph (b)(1) of this section, a statement that, by the compliance date, the major source intends to obtain and comply with federally enforceable limits on their poten-

tial to emit which make the facility an area source.

[60 FR 64336, Dec. 15, 1995, as amended at 61 FR 30816, June 18, 1996]

§ 63.788 Recordkeeping and reporting requirements.

(a) Each owner or operator of an affected source shall comply with the applicable recordkeeping and reporting requirements in § 63.10 (a), (b), (d), and (f). Any owner that receives approval pursuant to § 63.783(c) to use an add-on control system to control coating emissions shall also comply with the applicable requirements of § 63.10 (c) and (e). A summary of recordkeeping and reporting requirements is provided in Table 3 of this subpart.

(b) *Recordkeeping requirements.* (1) Each owner or operator of a major source shipbuilding or ship repair facility having surface coating operations with less than 1000 liters (L) (264 gallons (gal)) annual marine coating usage shall record the total volume of coating applied at the source to ships. Such records shall be compiled monthly and maintained for a minimum of 5 years.

(2) Each owner or operator of an affected source shall compile records on a monthly basis and maintain those records for a minimum of 5 years. At a minimum, these records shall include:

(i) All documentation supporting initial notification;

(ii) A copy of the affected source's approved implementation plan;

(iii) The volume of each low-usage-exempt coating applied;

(iv) Identification of the coatings used, their appropriate coating categories, and the applicable VOHAP limit;

(v) Certification of the as-supplied VOC content of each batch of coating;

(vi) A determination of whether containers meet the standards as described in § 63.783(b)(2); and

(vii) The results of any Method 24 of appendix A to 40 CFR part 60 or approved VOHAP measurement test conducted on individual containers of coating, as applied.

(3) The records required by paragraph (b)(2) of this section shall include additional information, as determined by the compliance procedure(s) described

in § 63.785(c) that each affected source followed:

(i) *Coatings to which thinning solvent will not be added.* The records maintained by facilities demonstrating compliance using the procedure described in § 63.785(c)(1) shall contain the following information:

(A) Certification of the as-applied VOC content of each batch of coating; and

(B) The volume of each coating applied.

(ii) *Coatings to which thinning solvent will be added—coating-by-coating compliance.* The records maintained by facilities demonstrating compliance using the procedure described in § 63.785(c)(2) shall contain the following information:

(A) The density and mass fraction of water and exempt compounds of each thinner and the volume fraction of solids (nonvolatiles) in each batch, including any calculations;

(B) The maximum allowable thinning ratio (or ratios, if the affected source complies with the cold-weather limits in addition to the other limits specified in Table 2 of this subpart) for each batch of coating, including calculations;

(C) If an affected source chooses to comply with the cold-weather limits, the dates and times during which the ambient temperature at the affected source was below 4.5°C (40°F) at the time the coating was applied and the volume used of each batch of the coating, as supplied, during these dates;

(D) The volume used of each batch of the coating, as supplied;

(E) The total allowable volume of thinner for each coating, including calculations; and

(F) The actual volume of thinner used for each coating.

(iii) *Coatings to which the same thinning solvent will be added—group compliance.* The records maintained by facilities demonstrating compliance using the procedure described in § 63.785(c)(3) shall contain the following information:

(A) The density and mass fraction of water and exempt compounds of each thinner and the volume fraction of solids in each batch, including any calculations;

(B) The maximum allowable thinning ratio (or ratios, if the affected source complies with the cold-weather limits in addition to the other limits specified in Table 2 of this subpart) for each batch of coating, including calculations;

(C) If an affected source chooses to comply with the cold-weather limits, the dates and times during which the ambient temperature at the affected source was below 4.5°C (40°F) at the time the coating was applied and the volume used of each batch in the group, as supplied, during these dates;

(D) Identification of each group of coatings and their designated thinners;

(E) The volume used of each batch of coating in the group, as supplied;

(F) The total allowable volume of thinner for the group, including calculations; and

(G) The actual volume of thinner used for the group.

(iv) *Demonstration of compliance through an alternative (i.e., non-Method 24 in appendix A to 40 CFR part 60) test method.* The records maintained by facilities demonstrating compliance using the procedure described in § 63.785(c)(4) shall contain the following information:

(A) Identification of the Administrator-approved VOHAP test method or certification procedure;

(B) For coatings to which the affected source does not add thinning solvents, the source shall record the certification of the as-supplied and as-applied VOHAP content of each batch and the volume of each coating applied;

(C) For coatings to which the affected source adds thinning solvent on a coating-by-coating basis, the source shall record all of the information required to be recorded by paragraph (b)(3)(ii) of this section; and

(D) For coatings to which the affected source adds thinning solvent on a group basis, the source shall record all of the information required to be recorded by paragraph (b)(3)(iii) of this section.

(4) If the owner or operator of an affected source detects a violation of the standards specified in § 63.783, the owner or operator shall, for the remainder of the reporting period during

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which the violation(s) occurred, include the following information in his or her records:

(i) A summary of the number and duration of deviations during the reporting period, classified by reason, including known causes for which a Federally-approved or promulgated exemption from an emission limitation or standard may apply.

(ii) Identification of the data availability achieved during the reporting period, including a summary of the number and total duration of incidents that the monitoring protocol failed to perform in accordance with the design of the protocol or produced data that did not meet minimum data accuracy and precision requirements, classified by reason.

(iii) Identification of the compliance status as of the last day of the reporting period and whether compliance was continuous or intermittent during the reporting period.

(iv) If, pursuant to paragraph (b)(4)(iii) of this section, the owner or operator identifies any deviation as resulting from a known cause for which no Federally-approved or promulgated exemption from an emission limitation or standard applies, the monitoring report shall also include all records that the source is required to maintain that pertain to the periods during which such deviation occurred and:

(A) The magnitude of each deviation;
(B) The reason for each deviation;

(C) A description of the corrective action taken for each deviation, including action taken to minimize each deviation and action taken to prevent recurrence; and

(D) All quality assurance activities performed on any element of the monitoring protocol.

(c) *Reporting requirements.* Before the 60th day following completion of each 6-month period after the compliance date specified in §63.784, each owner or operator of an affected source shall submit a report to the Administrator for each of the previous 6 months. The report shall include all of the information that must be retained pursuant to paragraphs (b) (2) through (3) of this section, except for that information specified in paragraphs (b)(2) (i) through (ii), (b)(2)(v), (b)(3)(i)(A), (b)(3)(ii)(A), and (b)(3)(iii)(A). If a violation at an affected source is detected, the source shall also report the information specified in paragraph (b)(4) of this section for the reporting period during which the violation(s) occurred. To the extent possible, the report shall be organized according to the compliance procedure(s) followed each month by the affected source.

[60 FR 64336, Dec. 15, 1995, as amended at 61 FR 66227, Dec. 17, 1996]

TABLE 1 TO SUBPART II OF PART 63—GENERAL PROVISIONS OF APPLICABILITY TO SUBPART II

Reference	Applies to subpart II	Comment
63.1(a)(1)–(3)	Yes.	Subpart II clarifies the applicability of each paragraph in subpart A to sources subject to subpart II.
63.1(a)(4)	Yes.	
63.1(a)(5)–(7)	Yes.	Discusses State programs.
63.1(a)(8)	No	
63.1(a)(9)–(14) ..	Yes.	§ 63.781 specifies applicability in more detail.
63.1(b)(1)	Yes.	
63.1(b)(2)–(3)	Yes.	Additional terms are defined in § 63.782; when overlap between subparts A and II occurs, subpart II takes precedence.
63.1(c)–(e)	Yes.	
63.2	Yes.	Other units used in subpart II are defined in that subpart.
63.3	Yes.	
63.4	Yes.	Except information on control devices and control efficiencies should not be included in the application unless an add-on control system is or will be used to comply with subpart II in accordance with § 63.783(c).
63.5(a)–(c)	Yes.	
63.5(d)	Yes.	Except § 63.784(a) specifies the compliance date for existing affected sources.
63.5(e)–(f)	Yes.	
63.6(a)–(b)	Yes.	If an alternative means of limiting emissions (e.g., an add-on control system) is used to comply with subpart II in accordance with § 63.783(c), then these paragraphs do apply.
63.6(c)–(d)	Yes.	
63.6(e)–(f)	No	§ 63.783(c) specifies procedures for application and approval of alternative means of limiting emissions.
63.6(g)	No	

TABLE 1 TO SUBPART II OF PART 63—GENERAL PROVISIONS OF APPLICABILITY TO SUBPART II—
Continued

Reference	Applies to subpart II	Comment
63.6(h)	No	Subpart II does not contain any opacity or visible emission standards.
63.6(i)–(j)	Yes.	
63.7	No	If an alternative means of limiting emissions (e.g., an add-on control system) is used to comply with subpart II in accordance with § 63.783(c), then this section does apply.
63.8	No	
63.9(a)–(d)	Yes	§ 63.787(a) extends the initial notification deadline to 180 days. § 63.787(b) requires an implementation plan to be submitted with the initial notification.
63.9(e)	No	
63.9(f)	No	Subpart II does not contain any opacity or visible emission standards
63.9(g)–(h)	No	
63.9(i)–(j)	Yes.	§ 63.788(b)–(c) list additional recordkeeping and reporting requirements.
63.10(a)–(b)	Yes	
63.10(c)	No	If an alternative means of limiting emissions (e.g., an add-on control system) is used to comply with subpart II in accordance with § 63.783(c), then this paragraph does apply.
63.10(d)	Yes.	
63.10(e)	No	If an alternative means of limiting emissions (e.g., an add-on control system) is used to comply with subpart II in accordance with § 63.783(c), then this paragraph does apply.
63.10(f)	Yes.	
63.11	No	If an alternative means of limiting emissions (e.g., an add-on control system) is used to comply with subpart II in accordance with § 63.783(c), then this section does apply.
63.12–63.15	Yes.	

TABLE 2 TO SUBPART II OF PART 63.—VOLATILE ORGANIC HAP (VOHAP) LIMITS FOR MARINE COATINGS

Coating category	VOHAP limits ^{a b c}		
	Grams/liter coating (minus water and exempt compounds)	Grams/liter solids ^d	
		t ≥ 4.5° C	t < 4.5° C ^e
General use	340	571	728
Specialty:			
Air flask	340	571	728
Antenna	530	1,439	
Antifoulant	400	765	971
Heat resistant	420	841	1,069
High-gloss	420	841	1,069
High-temperature	500	1,237	1,597
Inorganic zinc high-build	340	571	728
Military exterior	340	571	728
Mist	610	2,235	
Navigational aids	550	1,597	
Nonskid	340	571	728
Nuclear	420	841	1,069
Organic zinc	360	630	802
Pretreatment wash primer	780	11,095	
Repair and maint. of thermoplastics	550	1,597	
Rubber camouflage	340	571	728
Sealant for thermal spray aluminum	610	2,235	
Special marking	490	1,178	
Specialty interior	340	571	728
Tack coat	610	2,235	
Undersea weapons systems	340	571	728
Weld-through preon. primer	650	2,885	

^aThe limits are expressed in two sets of equivalent units. Either set of limits may be used for the compliance procedure described in § 63.785(c)(1), but only the limits expressed in units of g/L solids (nonvolatiles) shall be used for the compliance procedures described in § 63.785(c) (2) through (4).

^bVOC (including exempt compounds listed as HAP) shall be used as a surrogate for VOHAP for those compliance procedures described in § 63.785(c) (1) through (3).

^cTo convert from g/L to lb/gal, multiply by (3.785 L/gal)/(1/453.6 lb/g) or 1/120. For compliance purposes, metric units define the standards.

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^dVOHAP limits expressed in units of mass of VOHAP per volume of solids were derived from the VOHAP limits expressed in units of mass of VOHAP per volume of coating assuming the coatings contain no water or exempt compounds and that the volumes of all components within a coating are additive.

^eThese limits apply during cold-weather time periods, as defined in § 63.782. Cold-weather allowances are not given to coatings in categories that permit less than 40 percent volume solids (nonvolatiles). Such coatings are subject to the same limits regardless of weather conditions.

[60 FR 64336, Dec. 15, 1995, as amended at 61 FR 66228, Dec. 17, 1996]

TABLE 3 TO SUBPART II OF PART 63.—SUMMARY OF RECORDKEEPING AND REPORTING REQUIREMENTS^{a b c}

Requirement	All Opts.		Option 1		Option 2		Option 3	
	Rec	Rep	Rec	Rep	Rec	Rep	Rec	Rep
Notification (§ 63.9(a)–(d))	X	X						
Implementation plan (§ 63.787(b)) ^d	X	X						
Volume of coating applied at unaffected major sources (§ 63.781(b)) ..	X							
Volume of each low-usage-exempt coating applied at affected sources (§ 63.781(c))	X	X						
ID of the coatings used, their appropriate coating categories, and the applicable VOHAP limit	X	X						
Determination of whether containers meet the standards described in § 63.783(b)(2)	X	X						
Results of M–24 or other approved tests	X	X						
Certification of the as-supplied VOC content of each batch	X							
Certification of the as-applied VOC content of each batch			X					
Volume of each coating applied			X	X				
Density of each thinner and volume fraction of solids in each batch					X	X		
Maximum allowable thinning ratio(s) for each batch					X	X	X	X
Volume used of each batch, as supplied					X	X	X	X
Total allowable volume of thinner					X	X	X	X
Actual volume of thinner used					X	X	X	X
Identification of each group of coatings and designated thinners							X	X

^aAffected sources that comply with the cold-weather limits must record and report additional information, as specified in § 63.788(b)(3) (ii)(C), (iii)(C), and (iv)(D).

^bAffected sources that detect a violation must record and report additional information, as specified in § 63.788(b)(4).

^cOPTION 4: the recordkeeping and reporting requirements of Option 4 are identical to those of Options 1, 2, or 3, depending on whether and how thinners are used. However, when using Option 4, the term “VOHAP” shall be used in lieu of the term “VOC,” and the owner or operator shall record and report the Administrator-approved VOHAP test method or certification procedure.

^dMajor sources that intend to become area sources by the compliance date may, in lieu of submitting an implementation plan, choose to submit a statement of intent as specified in § 63.787(b)(4).

APPENDIX A TO SUBPART II OF PART 63— VOC DATA SHEET¹

Properties of the Coating “As Supplied” by the Manufacturer²

Coating Manufacturer: _____
Coating Identification: _____
Batch Identification: _____
Supplied To: _____

Properties of the coating as supplied¹ to the customer:

A. Coating Density: (D_c)_s _____ g/L
[] ASTM D1475–90* [] Other³

B. Total Volatiles: (m_v)_s _____ Mass Percent
[] ASTM D2369–93* [] Other³

C. Water Content: 1. (m_w)_s _____ Mass Percent
[] ASTM D3792–91* [] ASTM D4017–90*
[] Other³

2. (v_w)_s _____ Volume Percent
[] Calculated [] Other³

D. Organic Volatiles: (m_o)_s _____ Mass Percent

E. Nonvolatiles: (v_n)_s _____ Volume Percent
[] Calculated [] Other³

F. VOC Content (VOC)_s:

1. _____ g/L solids (nonvolatiles)

2. _____ g/L coating (less water and exempt compounds)

G. Thinner Density: D_{th} _____ g/L
ASTM _____ [] Other³

Remarks: (use reverse side)

Signed: _____ Date: _____

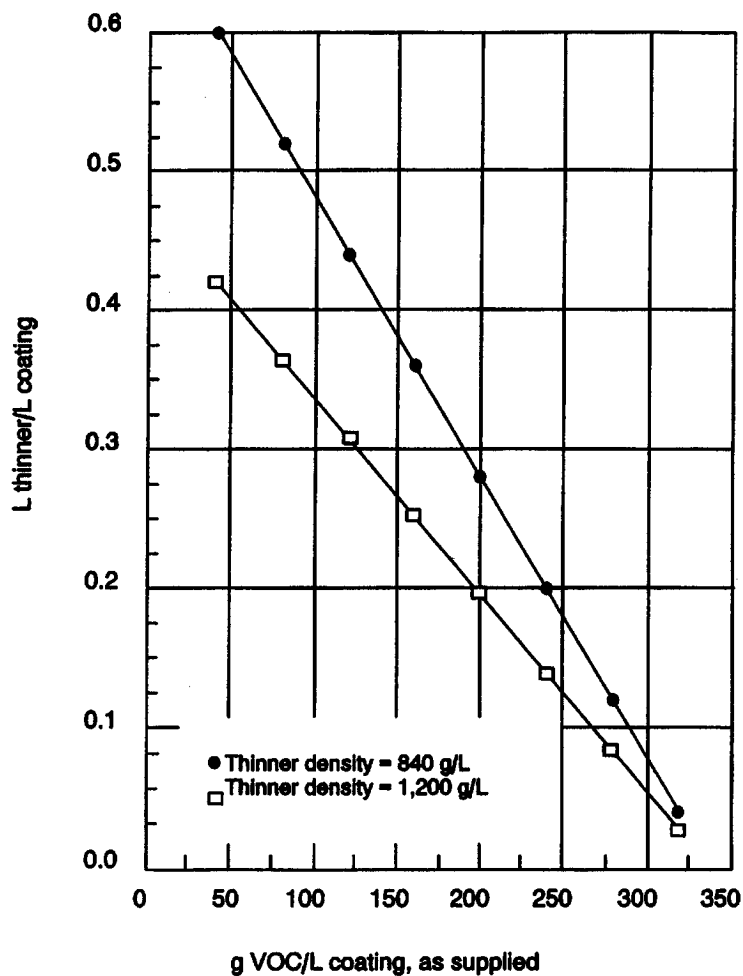
¹Adapted from EPA-340/1-86-016 (July 1986), p. II-2.

²The subscript “s” denotes each value is for the coating “as supplied” by the manufacturer.

*Incorporation by reference—see § 63.14.

³Explain the other method used under “Remarks.”

Appendix B To Subpart II of Part 63 -- Maximum Allowable Thinning Rates As A Function Of As Supplied VOC Content And Thinner Density^{a,b}



^a These graphs represent maximum allowable thinning ratios for general use coatings without water or exempt compounds.

^b The average density of the volatiles in the coating was assumed = 840 g solvent/L solvent.

[60 FR 64336, Dec. 15, 1995, as amended at 61 FR 66227, 66228, Dec. 17, 1996]